



5559-WO

	1				50
rhimi	SIDGGIRAAT	SQEINELTYT	TTLSANSYCR	TVIPGA...T	WDC..IHCDA
rhidl	SDGGKVVAAT	TAQIQEFTKY	AGIAATAYCR	SVVPGN...K	WDC..VQCQK
SP400	~~~~~EVS	QDLFNQFNLF	AQYSAAAYCG	KNNDAPAGTN	ITCTGNACPE
Pcl	~~~~~DVS	TSELDQFEFW	VQYAAASYYE	ADYTAQVGDK	LSCSKGNCPE
FoLnp11	~~~~~AVGVT	TTDFS NFKFY	IQHGAAYC.	.NSEAAAGSK	ITCSNNGCPT
	51				100
rhimi	TE..DLKIIK	TWS.TLIYDT	NAMVARGDSE	KTIYIVFRGS	SSIRNWIADL
rhidl	WV.PDGKIIT	TFT.SLLSDT	NGYVLRSDKQ	KTIYLVFRGT	NSFRSAITDI
SP400	VEKADATFLY	SFEDSGVGDV	TGFLALDNTN	KLIVLSFRGS	RSIENWIGNL
Pcl	VEATGATVS	DFSDSTITDT	AGYIAVDHTN	SAVVLAFRGS	YSVRNWNVADA
FoLnp11	VQNGGATIVT	SFVG.SKTGI	GGYVATDSAR	KEIVVSFRGS	INIRNWLTLN
	101				150
rhimi	TFVPVSY.PP	VSGTKVHKGF	LDSYGEVQNE	LVATVLDQFK	QYPSYKVAVT
rhidl	VFNFSDY.KP	VKGAKVHAGF	LSSYEQVVND	YFPVVQEQLT	AHPTYKVIVT
SP400	NFDLKEINDI	CSGCRGHDGF	TSSWRSVADT	LRQKVEDAVR	EHPDYRVVFT
Pcl	TFVHTNP.GL	CDGCLAELGF	WSSWKLVRDD	IIKELKEVVA	QNPNYELVVV
FoLnp11	DFGQEDC.SL	VSGCGVHSGF	QRAWNEISSQ	ATAAVASARK	ANPSFNVIST
	151				200
rhimi	GHS LGGATAL	LCALDLYQRE	EGLSSSNLFL	YTQGQPRVGD	PAFANYVVST
rhidl	GHS LGGAQAL	LAGMDLYQRE	PRLSPKNLSI	FTVGGPRVGN	PTFAYYVEST
SP400	GHS LGGALAT	VAGADLRGN.	.GY...DIDV	FSYGAPRVGN	RAFAEFLTVQ
Pcl	GHS LGAAVAT	LAATDLRGK.	.GYP..SAKL	YAYASPRVGN	AALAKYITAQ
FoLnp11	GHS LGGAVAV	LAAANLRVG.	.GT...PVDI	YTYGSPRVGN	AQLSAFVSNQ
	201				250
rhimi	G.IPYRRTVN	ERDIVPHLPP	AAFGFLHAGE	EYWITD.NSP	.....ETVQ
rhidl	G.IPFQRTVH	KRDIVPHVPP	QSFGFLHPGV	ESWIKS.GT.	.....SNVQ
SP400	TGGTLYRITH	TNDIVPRLPP	REFGYSHSSP	EYWIKS.GTL	V.PVTRNDIV
Pcl	G..NNFRFTH	TNDPVPKLPL	LSMGYVHVSP	EYWITS.PNN	A.TVSTSDIK
FoLnp11	A.GGEYRVTH	ADDPVPRLPP	LIFGYRHTTP	EFWLSGGGGD	KVDYTISDVK
	251				300
rhimi	VCTSDLETSD	CSNSIVPFT.	.SVLDHLSYF	GINTGLCT~~	~~~~~
rhidl	ICTSEIETKD	CSNSIVPFT.	.SILDHLSYF	DINEGSCL~~	~~~~~
SP400	KIEGID.ATG	GNNQP.NIP.	.DIPAH LWYF	.GLIGTCL~~	~~~~~
Pcl	VIDGDV.SFD	GNTGTGLPLL	TDFEAHIWYF	.VQVDAGKGP	GLPFKR V~~~
FoLnp11	VCEGAA.NLG	CNGGT.LGL.	.DIAAHLHYF	.QATDACNAG	GFSWRRYRSA
	301			338	
rhimi	~~~~~	~~~~~	~~~~~	~~~~~...	
rhidl	~~~~~	~~~~~	~~~~~	~~~~~...	
SP400	~~~~~	~~~~~	~~~~~	~~~~~...	
Pcl	~~~~~	~~~~~	~~~~~	~~~~~...	
FoLnp11	ESVDK RATMT	DAELEKKLNS	YVQMDKEYVK	NNQARS..	

Fig. 1  
Alignment of lipase sequences